We claim:

1. In a centrifugal clutch of the type having a plurality of cam members interposed between a cover and pressure plate, the cam members being movable radially outwardly under centrifugal force to cause the pressure plate to move in a direction forcing a plurality of clutch members into clutching engagement, the improvement comprising:

cam retainer means between said pressure plate and cover for guiding inward and outward radial movement of said cam members;

first means for maintaining a predetermined spacing between said cover and said retainer means;

second means for maintaining a predetermined spacing between said pressure plate and said retainer means including means biasing said pressure plate and said retainer means towards one another; and

a series of circumferentially spaced resilient biasing means interposed between said cover and said retainer means and wherein said resilient biasing means is operative to undergo compression in response to continued radially

outward movement of said cam members when the force exerted on said clutch members equals the force exerted by said resilient biasing means on said pressure plate and retainer means.

2. In a centrifugal clutch according to claim 1 wherein said cam retainer means includes a plurality of first indented cam faces arranged in concentric rows, each of said cam faces including a ramp inclining radially outwardly in a direction towards said pressure plate.

3. In a centrifugal clutch according to claim 2 wherein said pressure plate includes a plurality of second indented cam faces aligned with said first indented cam faces to define complementary pairs of said cam faces, each said complementary pair receiving one of said cam members therebetween.

4. In a centrifugal clutch according to claim 1 wherein said first means comprises threaded members extending between said cover and said retainer means.

5. In a centrifugal clutch according

to claim 1 wherein said second means includes biasing members between said pressure plate and said retainer means.

6. In a centrifugal clutch according to claim 5 wherein said second means comprises a plurality of circumferentially spaced threaded members connected to said pressure plate and said biasing members are associated with each of said threaded members.

7. In a centrifugal clutch according to claim 6 wherein said biasing members comprises spring members so mounted as to yieldingly compress said pressure plate and said retainer means toward one another.

8. In a centrifugal clutch according to claim 1 wherein disengagement means is provided for locking said pressure plate against advancement into engagement with said clutch members independently of the speed of rotation of said clutch.

9. In a centrifugal clutch according to claim 8 wherein said disengagement means includes a

control rod and means for connecting said control rod to said pressure plate.

10. In a centrifugal clutch according to claim 9 wherein said control rod extends centrally of said housing, and said connecting means includes a threadedly adjustable stem in the path of movement of said control rod.

11. In a centrifugal clutch having a plurality of cam members interposed between a cover and pressure plate, said cam members being movable radially outwardly under centrifugal force to cause said pressure plate to move in a direction forcing a plurality of clutch members into clutching engagement, the improvement comprising:

cam retainer means between said pressure plate and said cover for retaining said cam members in a plurality of concentric rows whereby to guide inward and outward radial movement of said cam members;

first fastener means for maintaining a predetermined spacing between said cover and said retainer means;

second fastener means for maintaining a predetermined spacing between said

pressure plate and said retainer means including means biasing said pressure plate and said retainer means toward one another;

a series of circumferentially spaced resilient biasing means interposed between said cover and said retainer means and wherein said resilient biasing means is defined by circumferentially spaced compression springs adapted to undergo compression in response to continued radially outward movement of said cam members once the force exerted on said clutch members equals the force exerted by said resilient biasing means on said pressure plate and retainer means; and

manual disengagement means engageable with said pressure plate to prevent engagement between said pressure plate and said clutch members independently of the speed of rotation of said clutch.

12. In a centrifugal clutch according to claim 11 wherein said disengagement means is provided for locking said pressure plate against advancement into engagement with said clutch members.

13. In a centrifugal clutch according to claim 12 wherein said disengagement means includes a control rod and means for connecting said control rod to said pressure plate.

14. In a centrifugal clutch according to claim 13 wherein said control rod extends centrally of said housing, and said connecting means includes a threadedly adjustable stem in the path of movement of said control rod.

15. In a centrifugal clutch according to claim 11 wherein said pressure plate and said retainer means include a plurality of indented cam faces arranged in inner and outer concentric rows and aligned with and facing one another to define complementary pairs of said cam faces, each said complementary pair receiving one of said cam members therebetween.

16. In a centrifugal clutch according to claim 11 wherein said outer row of said cam faces in said retainer means each includes a ramp inclining radially outwardly in a direction towards said pressure plate.

17. In a centrifugal clutch according to claim 16 wherein said first fastener means comprises threaded members extending between said cover and said retainer means.

18. In a centrifugal clutch according to claim 17 wherein said second fastener means comprises a plurality of circumferentially spaced threaded members interconnecting said pressure plate and said retainer means, and compression spring members associated with said threaded members to bias said pressure plate and said retainer means toward one another.

19. In a centrifugal clutch according to claim 11 wherein said resilient biasing means comprises a plurality of circumferentially spaced compression springs extending between outer peripheral portions of said cover and said retainer means.

20. In a centrifugal clutch according to claim 19 wherein each of said springs is a flat wire compression spring.

21. In a centrifugal clutch according to

claim 20 wherein each of said spring elements is a SPIRAWAVE® spring.

22. A centrifugal clutch having a rotary member to be driven, a hub coupled to said rotary member, a rotatable housing in outer spaced concentric relation to said rotary member, clutch members mounted for relative axial displacement into and out of engagement with one another between said hub and said housing, and a pressure plate axially displaceable between a cover and said clutch members; a plurality of cam members interposed between said cover and said pressure plate being movable radially outwardly at a predetermined speed of rotation to force said pressure plate axially away from said cover and in a direction causing said clutch members to move into clutching engagement with one another including cam guide means between said pressure plate and said cover for guiding the radial movement of said cam members; and pressure means between said cover and said pressure plate to prevent shock loads from being imparted to said clutch members when said clutch members are in clutching engagement with one another.

selectively advancing and retracting said rod in an axial direction whereby to manually control engagement and release of said clutch members independently of the speed of rotation of said clutch and pressure control means between said cover and said pressure plate to absorb shock loads between said clutch member and said transmission shaft.

24. An automatic clutch according to claim 23, said centrifugal force-responsive means having circumferentially spaced first and second cam faces disposed in facing relation to one another between said pressure plate and said housing, said first and second cam faces arranged in a plurality of concentric rows.

25. An automatic clutch according to claim 23, a plurality of cam members disposed between said first and second cam faces in each of said concentric rows wherein said cam members are movable radially outwardly between said cam faces to force said housing axially away from said drive unit and in a direction causing said clutch members to move into clutching engagement with one another.

23. A clutch for motorcycles disposed between a crankshaft of an engine and a transmission shaft wherein said clutch is provided with an inner hub coupled to said transmission shaft, an outer housing coupled to said crankshaft, frictional clutch members alternately extending from and fixed for rotation with said hub and said housing, respectively, and being axially displaceable into and away from frictional engagement with one another, a pressure plate at one end of said clutch members including spring means biasing said pressure plate in an axial direction away from said clutch members, and centrifugal force-responsive means movable radially and outwardly along said pressure plate to overcome said spring means and force said pressure plate axially against an endmost of said clutch members whereby to impart rotation between said housing and said hub, an elongated control rod extending centrally of said housing and being axially slidable with respect to said housing, actuating means between one end of said rod and said pressure plate being movable in response to axial movement of said rod to displace said pressure plate in an axial direction independently of said spring means, manual control means for

26. An automatic clutch according to claim 23 wherein said centrifugal force-responsive means includes circumferentially spaced rows of first and second cam faces disposed in facing relation to one another between said pressure plate and said cover and a plurality of cam members disposed between said first and second cam faces being movable radially outwardly between said cam faces to force said pressure plate in an axial direction causing said clutch members to move into clutching engagement with one another.

27. An automatic clutch according to claim 23 wherein said pressure control means includes a plurality of circumferentially spaced compression springs interposed between said cover and said centrifugal force-responsive means.

28. An automatic clutch according to claim 27 wherein said compression springs are flat wire wave springs.

29. An automatic clutch according to claim 28 wherein each of said compression springs includes inner and outer concentric flat wire wave springs mounted in spring seats between said cover

and said centrifugal force-responsive means.

30. An automatic clutch according to claim 29 wherein said cover includes an axially movable portion interposed between said cover and said pressure plate.